DEPARTMENT ON CHURCH AND SOCIETY
DIVISION OF STUDIES - WORLD COUNCIL OF CHURCHES

project papers

On the Common Christian Responsibility Toward Areas of Rapid Social Change

Papers in this series are circulated for private use only and may not by republished

ARCHIVES

February 1959 No. 19

H U N G E R : A CHALLENGE TO THE CHURCH TODAY

By John D. Metzler

Mr. Metzler is an ordained minister of the Church of the Brethren in the U.S.A. He was successively teacher and pastor in several of the mid-Western states of the United States, held an administrative post, and was director of Material Aid of the Church of the Brethren. He is the founder of the now widely known C.R.O.P. (Christian Rural Overseas Program) and directed it until he joined the Geneva staff of the World Council of Churches in October 1954 as secretary in charge of material aid in the Division of Interchurch-Aid and Service to Refugees. Mr. Metzler prepared the substance of this paper as background material for the annual consultation of that Division at Evian, France, May 1958.

Project papers are intended primarily for the use of consultants and study groups working on these topics. They are issued for information and as a basis of discussion. Comments and additional material on the subject matter of these papers are solicited.

17, route de Malagnou, Geneva, Switzerland

and New Zealand. The two out of every three of the world live chiefly in South America, Africa, Asia. (It is a striking phenomenon, as Professor E. de Vries pointed out in his report on the Study of Common Christian Responsibility to the Areas of Rapid Social Change at the World Council of Churches' Central Committee meeting held at Nyborg, Denmark, August 1958, that practically all the so-called "underdeveloped countries" are located south of approximately 38th degree north parallel - Ed.) And no matter whether countries are classified according to income, productivity, the quality and quantity of food resources, the life span of people, health and education, it is invariably the same countries that are at the top or at the bottom of the scale. (7)

Economic disparity.

The one-third of the world is industrialized, the two-thirds of the world are not industrialized. The industrialized segment has available to serve it great amounts of mechanical energy. The increase in mechanical energy available per person in the United States between the years 1937 and 1954 was 16 times the total amount of mechanical energy available per person in India in 1954. The total amount of mechanical energy for each person in North America in 1954 was roughly 30 times the amount of mechanical energy available to each person in Asia at the same time. (8) As part of this energy each person in the United States consumed 3,300 kw/hrs of electricity, each person in India consumed 21 kw/hrs of electrical energy. (9) When little energy is available to supplement human muscles, almost all of human labour is required for the production and processing of food. Thus, in India in 1955, 70% of the manpower was engaged directly in agriculture, and only 10% in manufacturing and construction, while in the United States at the same time but 14% of the manpower was engaged in agriculture, and 37% in manufacturing and construction. This allowed in India only 20% of the total manpower to be used for the services, education and the arts, and culture, while in the U.S. 49% of the manpower was available for those purposes. (10) This is reflected in various ways. For example, again, in 1955, each person in the U.S. was using directly or indirectly 478 kg of steel, each person in West Germany 319 kg of steel, while each person in India had only 6 kg of steel. (11) In 1954 in Canada there was one motor vehicle for each four persons, in the U.S. one for each three persons, in Brazil only one for 79 persons, while in India one for each 1,150 persons. (12) The telephone figures were almost the same, the U.S. having one telephone for each three persons, India having one for each 1,200 persons. (13)

This imbalance can also be shown in terms of income figures. Two out of each three persons in the world have an income not exceeding $ 60 per year. The income in the U.S. now exceeds $ 1,900 per person per year. (14) Two-thirds of the world's population produces less than 1/5 of the world's income (15), while that 6% of the world's population which lives in the U.S. controls 40% of the world's income. (16)

Literacy rate.

This same imbalance in the groups on the two sides of the chasm is reflected also in literacy figures. There is so little illiteracy in North America and Western Europe and Australia that the question of literacy is no longer asked in securing census information and is rated as 0, in persons 10 years of age or over. In India, 82 out of every 100 persons more than

10 years of age are unable to read and write, while in Turkey the figure is 65% of those over 10 years of age. (17) In 1955 the chances were one in 70 in Canada and the U.S. of being in an institution of higher education. In the rest of the world, excluding Europe and the USSR, the chances were one in 950. (18) Women students in Africa, outside of Tunisia and Algeria, were one for each 450,000 population, while women students in the U.S. were one for each 225 of the population. (19)

In the less developed countries there are twice as many children of school age per adult worker as in the economically developed countries. (20) These situations are most dramatically presented in terms of some statistics. For example, in 1953, there were over 9,200 pieces of letter mail per person in the U.S., while in India for the same year there were less than 8 pieces of letter mail per person. (21) But the Indian person could not read his letter, therefore why send him one? In 1954 Japan published 19,837 separate book titles, while Iran published 391. (22) In 1954, in the United Kingdom there were printed 570 newspapers for each 1000 persons, in Japan 400 newspapers for every 1000 persons, in India 8 newspapers for every 1000 persons, in Iran 6 for 1000 persons, and Laos 1 for 1000 persons. (23) 52 issues of a New York Sunday Times use the combined quantities of newsprint for a year, in 1954 figures, of Burma, India, Indonesia, Pakistan, Turkey, Iraq, Nigeria, British Cameroons, French West Africa, Ghana, British Togoland, Haiti, Guatemala, Honduras and Bolivia, having a combined population of 660 million of persons. (24) Newsprint, in 1954, per person in the U.S. amounted to 33.8 kg. In Morocco it was 0.6 kg, while in India it was 0.2 kg; approximately the weight of one roll of toilet paper. (25)

Probably 99% of the world's scientists are mobilized to find ways of meeting the needs, or the imagined needs, of one-fourth of the world's population. (26)

Health: Longevity and Mortality Rate.

Another very obvious difference in the groups on the two sides of this chasm is in their health. The alertness, the brightness of eye, the energy, the drive, the initiative is quite obvious on the side of the chasm where the one person is, but is quite lacking on the side where the two persons are. Life expectancy at age 0 for those born in the U.S. and the U.K. is now 68 years, and in the Netherlands 70 years, while life expectancy at age 0 for those born in India is 32 years. (27) Infant mortality in the Netherlands is 22 deaths per 1000 live births, in the U.S. and the U.K. 27 deaths per 1000 live births, while in India it is 119 deaths per 1000 live births. (28)

If we project the figures of life expectancy to the estimated population of India of 377 million, we find that more than 1,100 deaths will occur every hour for the next 36 years, which would not occur if Western standards of health were existing in India.

Medical facilities and services available.

Each day, over the past few years, the World Council of Churches has helped to relocate 45 refugees. Each day 700 persons cross from East Germany to West Germany. But each day 1 million persons die in the group on the left side of the chasm, who would live if they had the same food and health

situation as that which obtains in Western Europe and America.

Three-fourths of all the doctors in the world confine their attention to one-third of the world's population. (29) Persons living in Canada or the U.S. have 14 times the chance of a hospital bed as those living in Egypt, Ethiopia, Nigeria, Vietnam, Indonesia and Cambodia. (30) Five African countries with a population of 56 million have one trained dentist for each 1 1/4 million persons, while in the U.S. and Canada there was one trained dentist to every 2000 persons. (31)

Tuberculosis has an especially high incidence among students who are scrimping to gain an education. The majority of student deaths of tuberculosis occur in the countries that are in the greatest need of trained leadership. (32)

In Indonesia alone it is estimated that the worms parasitic inside of people consume an amount of food equal to the food consumption of 100,000 persons. (33)

An important factor in the health situation in the world is that there has been a mass decline of death rates due to such new drugs as vaccines, antibiotics like penicillin, and DDT. Ceylon, for example, has reduced by DDT its mortality rate by 34%, but there has been no corresponding rate of food increase. (34) In the past century, life expectancy has increased as much as it did in the previous 1800 years, and probably within the history of man. (35) In 1956 the number of people barely surviving was 5 times as great as the world's population when Christ was here. (36) A one-sided improvement in health practices can only result in a greater number being kept alive, but at a lower level of efficiency. One of the important contributing factors to disease is malnutrition, which possesses a double-barreled effect on health. It is a primary cause of certain diseases and a secondary cause of deaths in such diseases as malaria and tuberculosis. (37)

<u>All factors interwoven.</u>

So the evidence suggests rather strongly that in the poverty-pressed, illiterate, poorly clothed, poorly housed two-thirds of the world, the lot of the average individual has worsened appreciably during the last half century. They have become more poorly fed, there are fewer available goods per person. The striking improvements in food, in education, in culture, in the material comforts of life, in health, have taken place among the wealthier one-third of the world's people. (38)

<u>Racial and religious factors, too.</u>

Two further distinguishing facts need to be mentioned as points of separation between the larger group on one side of the chasm and the smaller group on the other side.

The small, wealthy, industrialized, highly educated, well-fed group that is enjoying the abundant life as this world can provide it, is <u>predominantly white</u>. The larger, ill-fed, poorly clothed, inadequately housed, improperly educated, economically underdeveloped group whose material standards are steadily deteriorating, is <u>predominantly coloured</u>. And even more disturbing is the fact that the group which enjoys the material benefit of this civilization is, or calls itself, <u>Christian</u>, or at least is so regarded by the

the other group, while the group, deprived of most of those benefits, is largely non-Christian.

II. Problem of Hunger

Let us examine in more detail one of the problems which faces the non-white, non-Christian two-thirds of the world, the problem of hunger. No one of these inter-related problems of poverty, of health, of literacy or of nutrition, can be solved apart from the others, but for convenience we examine one only.

Sir John Boyd-Orr, the first Director-General of the Food and Agricultural Organization, said: "The most urgent material need of the world today is food. Prolonged hunger causes social and political unrest. Unless people are fed, the best treaties and agreements can come to nothing. Hungry people cannot be satisfied by anything but food. The ill-fed outnumber the well-fed by nearly two to one. And if people are chronically hungry, it cannot be expected that they will always remain passive. Desperation will sooner or later lead them to seek some extreme solution." (39)

Food consumption and calory intake.

The United States may be considered as a leader (at least in terms of food intake) among the white Christian peoples of the world. India, while not necessarily the best, nor the worst, is one of the countries among the non-white, non-Christian peoples of the world, where we have relatively adequate statistics. Examining the figures on food consumption per capita in these two countries, we find that since pre-war days the U.S. has increased its consumption of food stuffs, with the exception of cereals which have rather sharply decreased. In India, the per capita consumption of all food stuffs, with the exception of fats, has decreased. India, in 1954, was consuming 118 kg of cereals per person, as compared to 143 kg before the war. Meat consumption had dropped from 3 kg to 1 kg, while fat consumption had climbed from 2 kg to 3 kg. The U.S. as compared with India's 1 kg of meat, was consuming 79 kg of meat. As compared to India's 3 kg of fats, the U.S. was consuming 21 kg of fats.

The total calories consumed per person in India, pre-war, was 1970. In 1954 it had dropped to 1685 calories. The consumption in the U.S. in 1954 was 3090 calories. While these figures are not true of every person or of every nation in the two groups (the one-third group and the two-thirds group), they are in general indicative of the situations in those groups.(40)

60% of the world eats less than 2,200 calories daily. Indonesia, in 1957, ate from 1,200 to 1,500 calories daily. (41)

About 65% of the world eats less than the requirements of nutrition, elaborately worked out on the basis of climate, age, sex, bodily weight, activity, would recommend. (42) The U.S. is consuming about 17% more than nutritionists say it needs, while India is consuming about 24% less than nutritionists say it needs.

On the basis of quality as well as of total calories, the average diet of North America, Oceania and Western Europe is from 2 to 3 times that of the underdeveloped regions where 70% of the world's people live. The present

world average is about one half that of the U.S. and Canada. (43)

Food resources and production.

Actually, North America has available about 4.8 times as much food per person as the Far East. Western Europe has 3 times as much. (44) This is because of the land available per person, as well as the cash income of the farmer. The average product of a year's labour brings about 30 times as much to an American farmer as to the tiller of soil in Asian countries. (45) Put in different terms, in the U.S. there are 10,800 calories available per day per person, while only 3,090 are consumed. In India, there are 2,250 calories available with 1,685 consumed, while Japan has 2,220 available and consumes 2,150. (46) This is even more sharply pointed out when we compare the number of hours or minutes of labour required by a worker in different sections of the world to earn different qualities of diets. To earn a 2,100 calory diet, largely starch, it takes a worker in Japan or in India an average of about two hours of labour. Thus, for one person to earn the food for a family of five would take 10 hours of work per day, with no margin left over for the provision of clothing, housing, education, and the other "necessities" of life, and this is a poor diet. If we increase the diet to a 3,000 calory diet with good food, containing plenty of animal proteins and protective foods, we find that it would take the worker in Japan and India an average of 4 hours, 10 minutes of labour. It would thus be utterly impossible for the head of a family with his own efforts to earn an adequate diet such as that of the 3,000 calory one.

Income and diet.

On the other hand, if we would take the average of Sweden, Denmark, Canada and the U.S., it would take just 17 minutes for the average factory worker to earn his 2,100 high starch diet, and only 38 minutes to earn his good diet. (47) Inadequate and unbalanced diets are still the common lot of more than half of the world's population, even though the threats of actual famine have receded. (48)

All of these things point out that the common pattern of diet in most countries is a basis of cereals and starchy foods, supplemented to the extent that the consumer can afford, by more expensive and attractive foods, including the so-called protective foods. When incomes first begin to rise above the bare subsistance level, the more expensive foods are largely additional to the basic diet. At higher income levels, the consumption of the staple foods begins to decline and to be replaced by larger intake of protective and other more expensive foods which ultimately may make up the larger part of the diet. (49)

In general, in regions where diets are quantitatively and qualitatively inadequate, when the per capita income rises from $ 50 to $ 100 per year, the total food intake in calories rises from 1,750 to 2,250 calories. When the income has risen from $ 100 to $ 220, the calory intake has likewise risen from 2,250 to 2,600. The highest consumption of starches is at this income point. Here, 61% of the total food intake is starch, about 1,600 calories. Also, on the average, at this point persons have reached 100% of the calory requirements, estimated in quantity only. When income rises from $ 220 to $ 500, the calory intake rises to 3,000, while the intake of starches and cereals drops to 1,350 calories, about 45% of the total intake. Above $ 800

income there is no increase in the total number of calories consumed, which remains at about 3,200, but there is a decrease in the starch and cereal intake. At $ 800 of income, the starch and cereals amount to about 1,100 calories or 35% of the total diet. At $ 1,500 income, the starch intake has dropped to about 850 calories, or 26% of the diet. (50)

Cereals and starchy foods commonly provide about 3/4 of the total calory supply in many underdeveloped countries. In many Western European countries and some of the more developed countries of Latin America, it stays at from 40 to 50% of the total calory intake. In the higher income countries of Western Europe, the ratio lies in the range of some 30 to 40%, while it is below 30% only in the U.S., Canada and New Zealand. (51)

Obstacles to improve diet.

The primary obstacle to the improvement of the diet of the many millions who now suffer from under- and malnutrition, is unquestionably their low economic status and lack of purchasing power. (52)

The relationship between income per capita and consumption of animal proteins - which are a pretty fair index of the quality of the diet - is in fairly direct ratio, climbing almost steadily to per capita incomes of $ 1,500.

To this rather dismal picture of dietary deficiencies we must add the rapidly increasing population of the world, and realize that much of this increase of population is coming in the already food-deficient areas. Every day there appear from 90,000 to 100,000 new mouths to feed. Will it be possible to meet this problem? It is a pressing question, for it seems that the lot of men in most underdeveloped areas is worse now than it was 50 years ago.

What can be done?

First, let us examine the technical possibilities. Is all the arable land of the world producing at its maximum level of output? The answer is obviously "no".

At the present time North America is producing 2,500 calories per day per acre of arable land. The U.S. alone is producing 4,500 calories per day per acre. Western Europe produces 7,500 calories per day per acre of arable land, three times that of North America as a whole. India produces only 2,500 calories per day per acre, while Japan produces the astonishing amount of 13,200 calories per day per acre. (53) Obviously, it is technically possible to greatly increase the production of food.

Technical improvement in agriculture.

One of the first ways to do this, of course, is to increase the yield per acre, improvement in cultural practices, the adoption of new and improved varieties of seeds, increase in the amount of fertilizers used, the use of supplemental irrigation, are all devices which can be used for increasing yields. In the U.S., maize production on the same soil has been increased over 50% in the last twenty years, largely by the use of hybrid varieties. In Japan, yields of rice per hectare are from 3 to 4 times as much as in India.

In animal production, improvements in breeding, disease-control, and management can increase the yield per animal from the same input of food. In Western Europe, milk and meat yields per animal have risen rather steadily by about 2% per annum with the same food input. (54)

Another major method for increasing the world's supply of food is to increase the area in productive crops. It is estimated that potentially, arable land, presently unused, is about 1/8 of the total agricultural area or about 370 million hectares. (55) This is land which can be put into production by irrigation with presently known and available water supplies, or by drainage, or by control of malaria, or by clearing by mechanical means of jungles and forest cover. An increase of 1/8 in the presently available supply of food would help tremendously.

Another method for increasing the available supplies of food is that of eliminating losses in storage and handling. Experts estimate that the loss in cereals, pulses and oil seeds alone, caused by insects, rodents and fungae, is equal to 10% of the production for the entire world. This is roughly the amount which enters total world trade. (56) If we take a country such as the U.S., estimates are that loss of from 8 to 16 million metric tons of grain in storage is caused by rats and insects. (57) This means that the losses in stored grains in the U.S. caused by rats and insects, would be sufficient to give one pound of grain daily every year to 114 million persons.

To increase yields of food stuffs, it may be necessary for us to shift from one type of crop to another. One acre of land will produce 43 lbs of protein per year in terms of beef. In terms of milk the yield increase is 77 lbs while soybeans will produce 450 lbs. (58) Sugarbeets will produce almost three times as much human food per acre as will wheat, and the yield of food per acre in terms of potatoes is almost twice that of wheat. (59)

Social and economic factors.

But the problems involved are not merely technical problems. Take the case of the farmer in Iran. He attempts to support a family of five on a rented two acres of land. One-fifth of his produce goes for seed, one-fifth for water, one-fifth for the rent of oxen, and one-fifth for the land rent, leaving him one-fifth to live on. At any time he may be turned off the land. (60)

The principal limitation upon the amount of food which we can produce is the amount of technology and the amount of energy which we are able and willing to devote to the matter. (61) Conventional agriculture will apparently suffice to feed 7 to 8 billion people, although only at standards of living lower than those of the best fed people today. (62) This might mean some decrease in the quality of the diet of the industrially advanced one-third of the world's population, but a great increase in the quantity and quality of the diet of the now underdeveloped two-thirds of the world's population.

Moral and spiritual aspect: Need of basic reorientation.

Agriculture involves more of the people in the world than any other productive activity. To change its procedures we must change the attitudes

of protein per year from the same land and alfalfa from 600 to 1,500 lbs.

and beliefs of the majority of the people in underdeveloped areas. (63) And changing attitudes and beliefs of man, whether of persons in the so-called underdeveloped areas who are not white and not Christian, and who outnumber the white Christian "favoured" persons of the world by two to one, or changing the attitudes of the "favoured" white Christian segment of the world, is not a technical problem but a spiritual one. This is indeed a challenge which the Church as the Church can ill afford to evade. Is there a well developed theology that helps her deal with the problem of hunger - a theology of hunger?

World community development.

When we take the very long view of man's world in the next century, we see that the main problems are less those of technology than they are those of man's getting along with other men, communicating with other men, and organizing themselves in such a way that their genius and imagination can be vigorously applied to the problems that confront them. Our major problems involve the enriching, enlarging, improving, and mobilizing of our intellectual forces. (64) If we accept the challenge and do all of these necessary things with wisdom and energy, we can hope to feed the world adequately and even handsomely, through and past the next century. And there appear to be no technological barriers to the feeding of a stable world population several times the present size. (65)

The future of our industrial society revolves around the question of whether man has learned to live with man. (66) It appears that the critical limiting factor, as far as the world's resources are concerned, is not materials, energy or food, but brainpower. (67) History teaches us the danger of poverty, when poverty has become conscious of itself. (68)

Either-or of our age.

Toynbee says: "Our age will be remembered not for its horrifying crimes or its astonishing inventions, but because it is the first age since the dawn of history, in which mankind dared to believe it practicable to make the benefits of civilization available to the whole human race". (69)

Do the Christians of the rich, healthy, well-fed section of the world accept the challenge? Will the churches recognize that technical knowledge points to the means that can be used and undertake the spiritual problem of man's attitudes? Certainly the distribution now found in voluntary agency activities - 50% for education, 30% for health, and less than 5% for agriculture - is far from the balance required to meet the needs of the less developed areas. (70)

Are the Christian churches fully aware what this all means? If aware, are they ready and willing to meet this challenge? From the above one can see that there is no lack of resources in that part of the world in which the Christian churches have some considerable influence. Even strictly in terms of the number of full-time professional personnel, there are more office holders in Christian churches than there are members of the Communist Party. (71).

Footnotes.

1) Population figures from the 1955 U.N. Statistical Yearbook
2) "To Plow with Hope", page 17
3) Statistical Yearbook, page 305
4) "To Plow with Hope", page 77
5) ibid, page 73
6) Statistical Yearbook, page 552
7) "Nutrition and Society", page 22
8) Statistical Yearbook, page 302
9) ibid, page 281
10) Statistical Yearbook, page 56
11) ibid, page 308
12) ibid, page 321
13) ibid, page 361
14) "To Plow with Hope", page 32
15) ibid, page 90
16) ibid, page 94
17) Statistical Yearbook, page 566
18) "To Plow with Hope", page 45
19) ibid, page 46
20) ibid, page 42
21) Statistical Yearbook, page 353
22) ibid, page 587
23) ibid, page 953
24) "To Plow with Hope", page 50-
25) Statistical Yearbook, page 591
26) "To Plow with Hope", page 79
27) Statistical Yearbook, page 51
28) ibid, page 47
29) "To Plow with Hope", page 30
30) ibid, page 32
31) ibid, page 33
32) ibid, page 30-31
33) ibid, page 30-31
34) "The next hundred years", p. 48-49
35) "To Plow with Hope", page 35
36) ibid, page 22
37) "To Plow with Hope", page 30
38) "The next hundred years", page 48
39) "To Plow with Hope", page 25
40) Statistical Yearbook, page 298
41) "To Plow with Hope", page 20
42) Second World Food Survey, page 12-13
43) "To Plow with Hope", page 21
44) "The State of Food and Agriculture", p. 74
45) "To Plow with Hope", page 143
46) "The next hundred years", page 57
47) "The State of Food and Agriculture", p.108
48) ibid, page 1
49) ibid, page 107
50) ibid, page 88-89
51) ibid, page 74
52) Second World Food Survey, page 33, and "The State of Food and Agriculture", p. 7
53) "The next hundred years", page 57
54) Second World Food Survey, page 30
55) ibid, page 28
56) "Food and Population", page 566
57) Second World Food Survey, page 31
58) "The next hundred years", page 71
59) ibid, page 72
60) "To Plow with Hope", page 66
61) "The next hundred years", page 81
62) ibid, page 69
63) ibid, page 82
64) ibid, page 153
65) ibid, page 88
66) ibid, page 154
67) ibid, page 115
68) "Nutrition and Society", page 26
69) "Food and Population", page 582
70) "To Plow with Hope", page 173
71) ibid, page 201

BIBLIOGRAPHY

United Nations Statistical Yearbook, 1955, New York.

To Plow with Hope, by Donald K. Faris, 1958, Harper & Bros.

Nutrition and Society, No. 1 of Series World Food Problems, FAO, 1956, Rome

The next hundred years, by Harrison Brown, James Bonner and John Weir, 1957, Ed. Weidenfeld and Nicolson, London

Second World Food Survey, FAO

The State of Food and Agriculture, F.A.O. 1957

Food and Population, 1952, by F. L. McDougall. (ed. Carnegie Endowment for International Peace, New York). Series: International Conciliation.